**Lesson Plan Title: Electron Configuration Notes**

**Teacher’s Name: Mr.Gomez Subject/Course: Chemistry**

**Unit: Periodicity & Electron Configuration Grade Level: Chemistry**

**Overview of and Motivation for Lesson:**

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| **Stage 1-Desired Results** | | |
| **Standard(s):**   * HS-PS1-1. Use the periodic table as a model to predict the relative properties of main group elements, including ionization energy and relative sizes of atoms and ions, based on the patterns of electrons in the outermost energy level of each element. Use the patterns of valence electron configurations, core charge, and Coulomb’s law to explain and predict general trends in ionization energies, relative sizes of atoms and ions, and reactivity of pure elements. Clarification Statement: \* Size of ions should be relevant only for predicting strength of ionic bonding. State Assessment Boundary: \* State assessment will be limited to main group (s and p block) elements. | | |
| **Aim/Essential Question:**   * What are similarities with elements with same electron Configuration endings? | | |
| **Understanding(s):**  *Students will understand that . . .*   * Electron configuration consists of 4 different shapes * Each orbital has a max number of electrons | | |
| **Content Objectives:**  *Students will be able to . . .*   * Identify the difference between s,p,d and f orbitals * Identify number of electrons in each orbital * Draw shape of s and p orbitals | | **Language Objectives:**  ELD Level 2 *Students will be able to . . . in English*   * Associate Electron Orbital shapes with maximum number of electrons   ELD Level 4 *Students will be able to . . . in English*   * Analyze electron orbitals and explain why each orbital can only hold x amount of electrons |
| **Key Vocabulary**   * Orbital | | |
| **Stage 2-Assessment Evidence** | | |
| **Performance Task or Key Evidence**   * None | | |
| **Key Criteria to measure Performance Task or Key Evidence**   * Ask questions to determine whether students can differentiate between each orbital shape and how much each electron orbital can hold. | | |
| **Stage 3- Learning Plan** | | |
| **Learning Activities:**  Do Now/Bell Ringer/Opener: Plickers questions on Bohr Model  Learning Activity 1:  Electron Configuration Notes  Learning Activity 2:  Modeling different orbital shapes  Application  **Electron configuration shapes help determine where electrons can be found in atom**  Summary/Closing  **Give a preview of tomorrows lesson by acing do they think there are any rules for writing electron configuration**  **Multiple Intelligences Addressed:**   |  |  |  |  | | --- | --- | --- | --- | | Linguistic | Logical-Mathematical | Musical | Bodily-kinesthetic | | Spatial | Interpersonal | Intrapersonal | Naturalistic |   **Student Grouping**  Whole Class  Small Group  Pairs  Individual  **Instructional Delivery Methods**  Teacher Modeling/Demonstration  Lecture  Discussion  Cooperative Learning  Centers  Problem Solving  Independent Projects | | |
| **Accommodations**  None | **Modifications**  Start Electron Configuration rules if done early | |
| **Homework/Extension Activities:**  None | | |
| **Materials and Equipment Needed:**   * PowerPoint | | |

**Adapted from Grant Wiggins and Jay McTighe-*Understanding by Design***